Influence of novel and conventional antipsychotic medication on subjective quality of life

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Introduction

Quality-of-life assessments have been used in the health sciences, primarily to identify needs of patients, facilitate program planning and monitor clinical progress and outcome. Recently, scientists have begun to assess quality of life in patients with schizophrenia, and the issue of quality of life of those with psychiatric

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disorders has quickly gained prominence in psychiatry. Researchers have found that several factors can affect quality of life, including age, sex, severity of psychopathology, side effects, patient’s subjective response to medication and psychosocial adjustment. According to Awad, the most important aspect of quality of life is how a person feels and functions in everyday life; there is therefore a need for patients to subjectively rate their own quality of life.

Researchers have noted an association between subjective quality of life and negative symptoms and depression in schizophrenia. For example, Tollefson and Anderson found a significant correlation between the “mood” item on the Positive and Negative Syndrome Scale (PANSS) and the Quality of Life Scale. Recent investigations have observed that novel antipsychotic medications seem to be more effective than conventional antipsychotics in reducing depressive symptoms, and this could improve quality of life.

Studies indicate that novel antipsychotics may have a positive effect on patient quality of life, and this is often associated with improvements in psychopathology and depressive symptoms as well. We therefore compare the subjective quality-of-life ratings of outpatients with chronic psychoses who were taking novel antipsychotics to the ratings of patients taking conventional antipsychotic medication.

**Method**

**Subjects**

For the original studies, from which the data for this study was obtained, patients were randomly drawn from the list of active files (i.e., patients had been seen in the previous 4 months) of outpatients with schizophrenia or schizoaffective disorder treated at the Community Mental Health Centre (CMHC) of the Montreal General Hospital. Selected patients who gave informed consent were interviewed one-on-one by researchers who were not part of the clinical team. Patients’ data were obtained from 2 studies conducted at the CMHC. One study, conducted between February and December of 1997, focused on patient satisfaction with services (n = 68, refusal rate 40%), and the other, conducted between January and December 1998, involved patients with possible dual diagnoses (n = 23 patients who did not have dual diagnoses).

**Instrument**

Quality of life was assessed using the Mercier and Corten version of the Satisfaction with Life Domains Scale (SLDS), a general quality-of-life questionnaire which measures patient satisfaction with 19 domains of everyday life, including health, clothing, food, housing and social relationships, as well as satisfaction with life in general. Patients are asked, “How do you feel about...” and answer using stylized faces on a 7-point scale, with scores ranging from 1 (very unhappy face) to 7 (very happy face). This version of the scale has excellent internal consistency (α = 0.92) and good test–retest reliability (r = 0.73).

Information on the type and dosage of medication the patients were taking at the time of the interview was available from hospital charts.

**Analyses**

Analyses for the present study were conducted post hoc, with data from the original studies. Patients were divided into groups on the basis of the antipsychotic medication they were taking at the time of the interview (conventional, novel or mixed [both conventional and novel]). Further, daily chlorpromazine dose equivalents were calculated according to the equivalence table of the American Psychiatric Association (APA) guidelines. For medications not listed there, the equivalence table of Kaplan et al was used. The mean daily dosage equivalent of antipsychotic medication for all patients was used to divide the sample into higher- and lower-dose groups for further analysis. Analysis of variance was performed on the quality-of-life ratings with either medication (3 types) or the daily-dosage equiva-
lent (2 levels) as between-groups measures. Variables that correlated significantly with quality-of-life measures were used as covariates in analysis of covariance.

**Results**

**Subjects**

The mean age (and standard deviation [SD]) of the 91 patients was 43.3 (SD 10.3) years, and the mean Global Assessment of Functioning (GAF) score\(^2\) for the patients for whom one was available (\(n = 80\)) was 48.0 (SD 12.5); this GAF score corresponds to “serious symptoms (e.g., suicidal ideation, severe obsessional rituals, frequent shoplifting) or any serious impairment in social, occupational or school functioning.”\(^2\) According to the hospital charts, 70 (77%) of the 91 patients were diagnosed with schizophrenia and 21 (23%) with a schizoaffective disorder.

All patients were diagnosed with chronic psychiatric illnesses. On average, the 68 patients from the satisfaction survey\(^2\) had been seen in psychiatry for the past 17.3 (SD 9.1) years, had been admitted to a psychiatric hospital 1.8 (SD 3.0) times in the previous 5 years and had visited psychiatric emergency once (SD 2.5) in the previous year. The 23 control patients from the dual-diagnosis study\(^2\) had been admitted to hospital for psychiatric reasons an average of 5.4 (SD 5.3) times during their lives and an average of 0.7 (SD 1.2) times in the previous 2 years.

**Antipsychotic medications**

Of the 91 patients, 41 (45%) were taking conventional antipsychotics (36% of these on depot preparations), 26 (29%) were taking novel antipsychotics and 24 (26%) were taking both conventional and novel antipsychotics (35% taking a depot medication). Patients could be prescribed more than 1 kind of antipsychotic within their medication group, and they could also be taking antidepressant, anticholinergic or anti-parkinsonian medications. Of the patients in the conventional group, 14 (34%) were taking haloperidol, 8 (20%) perphenazine, 7 (17%) chlorpromazine, 5 (12%) flupenthixol, 4 (10%) tri-fluoperazine and the remaining 6 (15%) patients were taking either methotrimeprazine, thioridazine, fluphenazine or zuclopenthixol (total percentages exceed 100% because 6 (15%) of the “conventional” patients were taking more than 1 antipsychotic medication). Of the patients in the novel group, 15 (58%) were taking risperidone, 9 (35%) olanzapine and 3 (12%) clozapine (1 patient was taking both risperidone and clozapine).

For the patients in the mixed group (both conventional and novel antipsychotics), the most commonly prescribed novel medication was risperidone (\(n = 14\) [58%]), with 8 (33%) patients taking olanzapine and 1 (4%) each taking clozapine or quetiapine.

As Table 1 shows, the 3 medication groups did not differ significantly in age, sex or GAF score, but patients taking both novel and conventional antipsychotics were found, perhaps not surprisingly, to be taking higher daily doses of chlorpromazine equivalents than patients in the conventional group. Daily dose equivalent was not correlated with any of the measures of quality of life, so it was not used as a covariate. GAF score was correlated with many measures of quality of life, and was therefore used as a covariate. Patients in the conventional medication group were on the same dose and

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Conventional (n = 41)</th>
<th>Novel (n = 26)</th>
<th>Mixed* (n = 24)</th>
<th>Statistical results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (and SD), yr</td>
<td>44.8 (11.4)</td>
<td>41.2 (8.8)</td>
<td>42.9 (9.7)</td>
<td>(F = 1.00, \ p = 0.37)</td>
</tr>
<tr>
<td>No. of men (and %)</td>
<td>20 (49)</td>
<td>17 (65)</td>
<td>13 (54)</td>
<td>(\chi^2 = 1.78, \ p = 0.41)</td>
</tr>
<tr>
<td>Mean GAF score (and SD)</td>
<td>50.3 (12.9)</td>
<td>44.2 (13.5)</td>
<td>48.8 (9.6)</td>
<td>(F = 1.85, \ p = 0.16)</td>
</tr>
<tr>
<td>Mean daily dose equivalent (and SD), mg</td>
<td>369.8 (388.5)</td>
<td>425.1 (297.5)</td>
<td>606.9† (328.6)</td>
<td>(F = 3.19, \ p &lt; 0.05)</td>
</tr>
<tr>
<td>N. o. of weeks on the same medication (and SD)</td>
<td>26.8 (32.2)</td>
<td>6.8 (10.0)</td>
<td>6.5 (4.9)</td>
<td>(F = 6.21, \ p &lt; 0.01)</td>
</tr>
</tbody>
</table>

\(^{*}\)Both conventional and novel antipsychotic medications.

\(^{†}\)Dosages for patients taking “mixed” antipsychotics were significantly higher than for those taking conventional antipsychotics.
type of medication for significantly longer periods of
time than those in the other 2 groups, but time on the
same medication did not correlate with any of the mea-
sures of quality of life, so it was not used as a covariate.

Table 2 presents the quality-of-life ratings for the 3
antipsychotic medication groups. There were very few
differences between groups in their quality of life
scores, but the items “how you get along with other
people” and “your relationship with your family” were
rated lower by patients taking novel antipsychotics
than those in the other groups.

Daily dose equivalents

We were also interested in the effect of high daily
doses of antipsychotic medication on patients’ views of
their quality of life, as LeBlanc et al29 reported that high
doses of neuroleptics are associated with psychosocial
dysfunction. The mean daily dosage chlorpromazine
equivalent, calculated for each patient according to the
table of equivalence of the APA guidelines for schizo-
phrenia,27 was 438.9 (SD 348.5) mg; 59 patients were
taking lower doses, and 32 were taking higher doses.
There were no significant differences in terms of qual-
ity of life between lower- and higher-dose groups.

Discussion

Contrary to our expectations, we found very few differ-
ences in subjective ratings of quality of life between
patients taking conventional, novel or mixed antipsy-
chotic medications. Patients taking novel antipsychotics
rated their quality of life lower only in the interpersonal
relationships domain. This may be related to the fact
that the SLDS25 measures general life satisfaction, not
health-related satisfaction; medication plays a small role
in a patient’s wish for better housing, for example. How-
ever, the scale does include a “health” item, which
did not discriminate between the 3 groups. Further,
since GAF scores were used as a covariate, one cannot
say that patient’s level of impairment or treatment resis-
tance contributed to lower quality-of-life scores.

The quality-of-life findings may have been influ-
enced by patients’ use of other medications. For exam-

<table>
<thead>
<tr>
<th>Item, “How do you feel about...”</th>
<th>Conventional</th>
<th>Novel</th>
<th>Mixed</th>
</tr>
</thead>
<tbody>
<tr>
<td>The place where you live</td>
<td>5.1</td>
<td>5.2</td>
<td>5.1</td>
</tr>
<tr>
<td>Your neighbourhood</td>
<td>4.8</td>
<td>5.2</td>
<td>5.4</td>
</tr>
<tr>
<td>The food you eat</td>
<td>5.2</td>
<td>5.0</td>
<td>4.6</td>
</tr>
<tr>
<td>The clothing you wear</td>
<td>5.4</td>
<td>4.8</td>
<td>4.7</td>
</tr>
<tr>
<td>Your health</td>
<td>5.2</td>
<td>4.5</td>
<td>4.9</td>
</tr>
<tr>
<td>The people you live with</td>
<td>5.1</td>
<td>5.0</td>
<td>4.5</td>
</tr>
<tr>
<td>Your friends</td>
<td>5.5</td>
<td>4.9</td>
<td>5.4</td>
</tr>
<tr>
<td>Your love life</td>
<td>3.9</td>
<td>4.4</td>
<td>4.5</td>
</tr>
<tr>
<td>Your relationship with your family</td>
<td>5.4</td>
<td>4.3*</td>
<td>5.3</td>
</tr>
<tr>
<td>How you get along with other people</td>
<td>5.7</td>
<td>4.4†</td>
<td>5.2</td>
</tr>
<tr>
<td>Your work and daily activities</td>
<td>4.2</td>
<td>4.4</td>
<td>4.7</td>
</tr>
<tr>
<td>The way you spend your spare time</td>
<td>4.2</td>
<td>4.0</td>
<td>4.9</td>
</tr>
<tr>
<td>What you do in the community for fun</td>
<td>4.5</td>
<td>4.1</td>
<td>4.3</td>
</tr>
<tr>
<td>The services and facilities in this area</td>
<td>5.1</td>
<td>5.1</td>
<td>4.9</td>
</tr>
<tr>
<td>Your financial situation</td>
<td>4.3</td>
<td>3.7</td>
<td>4.0</td>
</tr>
<tr>
<td>Your life, in general</td>
<td>4.8</td>
<td>4.0</td>
<td>4.7</td>
</tr>
<tr>
<td>Your self-confidence</td>
<td>4.9</td>
<td>4.4</td>
<td>4.7</td>
</tr>
<tr>
<td>What others think of you</td>
<td>4.8</td>
<td>3.9</td>
<td>4.6</td>
</tr>
<tr>
<td>The amount of freedom you have</td>
<td>5.3</td>
<td>4.7</td>
<td>4.9</td>
</tr>
<tr>
<td>The responsibilities that you are given</td>
<td>5.2</td>
<td>4.7</td>
<td>4.7</td>
</tr>
</tbody>
</table>

*Mean score for those taking novel antipsychotics significantly different from those taking conventional or mixed
medications (F = 3.3 p < 0.05).
†Mean score for those taking novel antipsychotics significantly different from those taking conventional
antipsychotics (F = 5.4, p < 0.01).
ple, antidepressive and anti-parkinsonian medications alleviate depressive symptoms or dystonia and may increase subjective quality of life. Post-hoc analyses, however, showed that there was no difference in patients taking antidepressive or anti-parkinsonian medications (n = 43), and those not (n = 48) on the GAF. Only 1 difference approached significance on 1 quality of life item (i.e., how patients felt about the people they lived with) (F1,69 = 3.9, p = 0.05), with those on antidepressive or anti-parkinsonian medications rating themselves higher. However, there was no significant difference in the proportion of patients in each group taking these adjuvant medications (conventional 51%, novel 31%, mixed 58%, χ² = 4.28, p > 0.05).

Another explanation for these results may be that those on novel antipsychotic medications have been “reawakened.” They may be more aware, less passive and less complacent, and thus may have higher life expectations than those on conventional antipsychotics, and life expectations are related to subjective quality of life. The preliminary results of a study in progress indicate that after 8–12 months on risperidone, quality of life returns to baseline levels, suggesting that as medication improves life expectations, patients may be less happy with what they have.

As exploratory, post-hoc research, this study has some limitations. The study is cross-sectional, and patient assignment to medication group was not random. The quality-of-life measure is not health related, nor does it assess symptoms, side effects or other treatment-related issues. Also, we did not have a baseline measurement of quality of life, so we could not determine whether patients with a poorer quality of life were put on conventional or on novel antipsychotics. We were also surprised to find a sizable “mixed” medication group, where patients are prescribed both novel and conventional antipsychotics, representing about one-quarter of the patient sample. This obviously reflected the clinical reality of switching patients with chronic mental illness to novel antipsychotic medications. However, Weiden and Casey warn of a “psychopharmacologic purgatory,” where such a group of patients may represent those not ever completing a cross-over from old to new antipsychotic medications. Some patients in the mixed antipsychotic group had been on their particular medication regimen for only 6 weeks, perhaps indicating a recent change of medication.

Research investigating the association between the quality of life of patients with serious chronic psychiatric disorders and type of medication they are taking is a new and growing field. So far, few studies of novel antipsychotics have targeted quality of life directly. Future studies should assess general quality of life (measuring various life domains), as well as health-related quality of life (measuring severity of psychopathology, side effects and attitudes toward medication), as suggested by Awad and colleagues. Such studies will give a more complete picture of the quality of life of patients whose lives include long-term intake of antipsychotic medications.

References


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